

AVERTISSEMENT : Demande de mise en place de moyens de protection pour une espèce « en danger ».

Présence en Martinique d'une espèce classée comme « en danger » dans la liste rouge des espèces menacées d'extinction IUCN 2014.



Epinephelus striatus (Bloch, 1792)

Noms vernaculaires : Vierge Caye (Martinique), Mérou Rayé, Mérou Strié, Mérou de Nassau, Nassau Grouper, Vieille Franche,...



Nous sommes, le groupe de recherche BIOSPHERES (EA 929) de l'université UAG pôle Martinique, l'association OCEANvironnement et l'association Flabellina, heureux de vous informer de la découverte de juvéniles d'*Epinephelus striatus* appelé aussi (Noms vernaculaires) : *Mérou Rayé*, *Mérou Strié*, *Mérou de Nassau*, *Nassau Grouper*, *Vierge Caye (Martinique)*, *Vieille Franche*,... dans la baie de Fort de France et plus particulièrement sur la caye de la Grande Sèche. Cette espèce n'a pas été observée depuis longtemps en Martinique par les plongeurs et les pêcheurs. Cette découverte est une bonne nouvelle pour la biodiversité de la Martinique. Cette espèce est classée dans la liste IUCN 2014 ¹ au statut « *En danger* ».

1. Taxonomie

Royaume	Phylum	Classe	Ordre	Famille
ANIMALIA	CHORDATA	ACTINOPTERYGIIPERCIFORMES		Epinephelidae

Nom scientifique: *Epinephelus striatus*

Espèce Autorité: (Bloch, 1792)

Nom commun (s):

- Anglais - Mérou de Nassau
- Espagnol - Cherna, Cherna Criolla
- Martinique - **Vierge Caye**
- Guadeloupe - **Veille Franche**

Synonyme (s): *Epinephelus striatus* (Bloch, 1792)

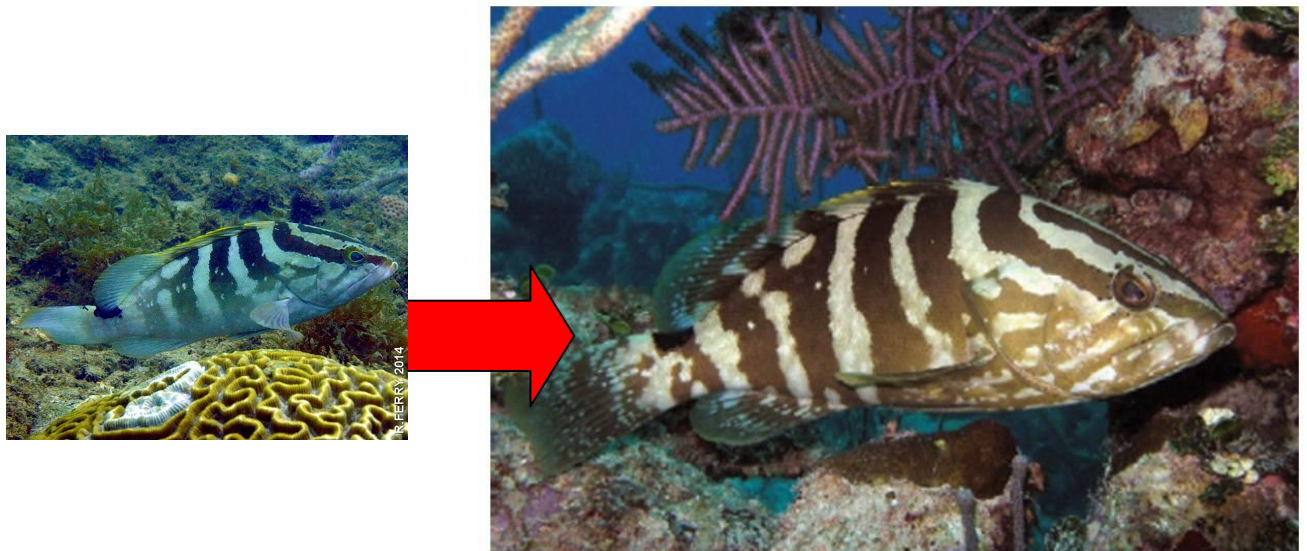


Figure 1 : *Epinephelus striatus* (Bloch, 1792) Juvénile et Adulte (Source : Gauche Oceanvironnement à droite photographie issue du site www.OCEANA.org)

¹ Cornish, A. & Eklund, A.-M. 2003. *Epinephelus striatus*. In: IUCN 2014. IUCN Red List of Threatened Species. Version 2014.1. <www.iucnredlist.org>. Downloaded on **29 June 2014**.

2. Compte rendu d'observations

- **Circonstance de découverte** : plongées en scaphandrier.
- **Taille estimée des individus** : 16-18 cm.
- **Comportement face au plongeur** : *L'Epinephelus striatus* se laisse approcher mais s'il prend peur il se cache sous les patates Corail-Eponge présentes dans la zone.
- **Age** : Les spécimens observés semblent avoir le même âge ce qui laisse penser qu'ils sont issus d'une même ponte.
- **Dates d'observations** : Septembre 2013, Janvier 2014, Mai 2014, juin 2014.
- **Répartitions des observations** : Voir figures ci-dessous.

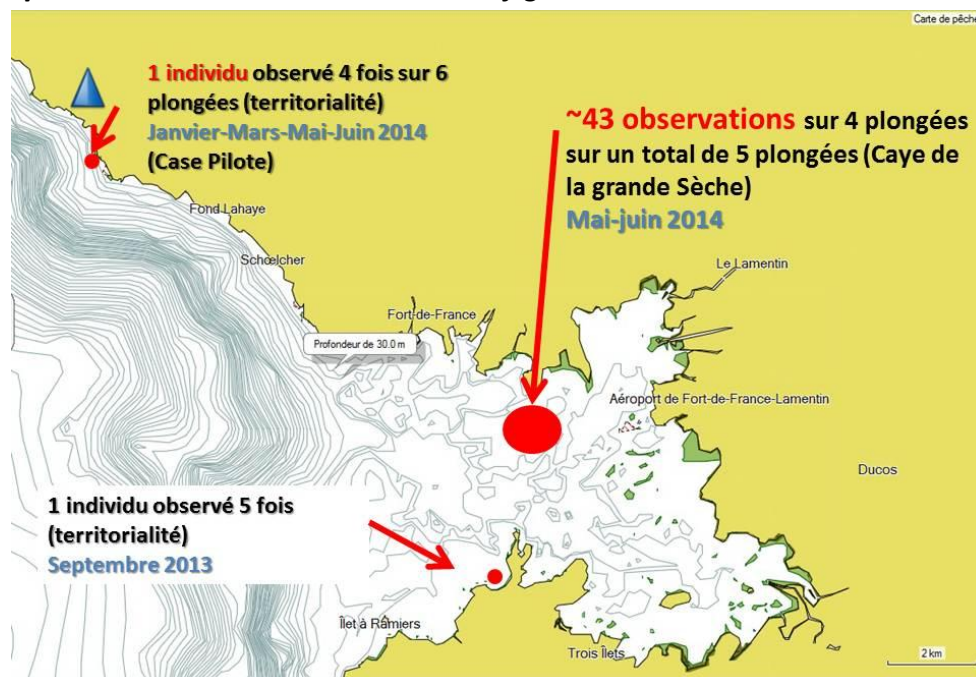


Figure 2 : Cartographie des observations à la date du 27/06/2014. (Source cartographique Garmin ©HXUS03OR-Southeast Caribbean v2013).

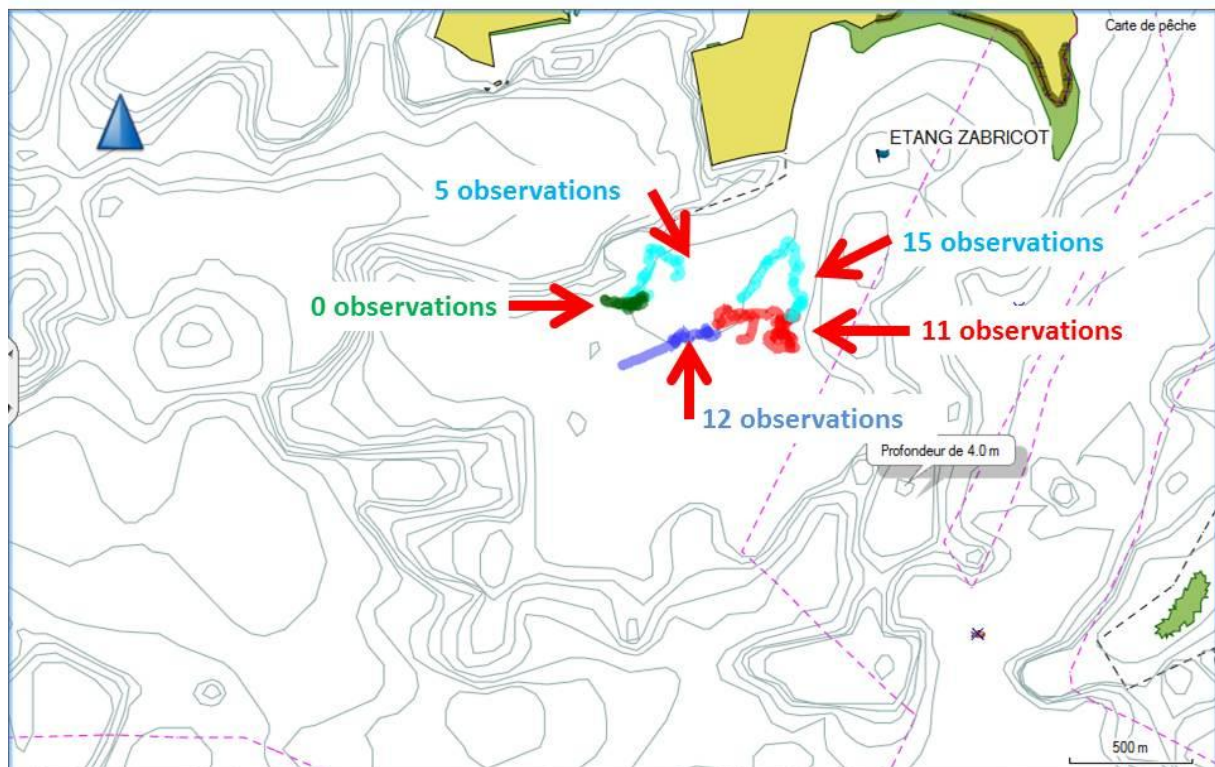


Figure 3 : Cartographie des observations volontairement sous-estimées d'*Epinephelus striatus* à la date du 27/06/2014. L'ensemble de ces observations ce sont faites sur une durée d'un mois et demi. Les plongées ont été suivies par un GPS embarqué. (Source cartographique Garmin ©HXUS03OR-Southeast Caribbean v2013).

3. Quelques individus photographiés.





Figure 4 : Photographies prises par les plongeurs. Ces observations permettent de conclure que les individus ont des tailles similaires. Cet argument laisse penser qu'il s'agit d'individus issus d'une ponte.

Conclusion :

A l'heure où la protection de la biodiversité est un des engagements fort de l'Etat et de l'ensemble des collectivités régionales, cette découverte est un signe encourageant pour démontrer notre capacité à sauvegarder une espèce considérée comme en danger et en voie de disparition. De plus cette espèce a été signalée par des scientifiques comme un prédateur « potentiel » du poisson lion (Pterois volitans) (Alfonso et al. 2010, Maljković et al. 2008)²³.

Suite à l'importance de cette découverte récente et d'intérêt nous nous posons les questions suivantes :

- Quelles sont les instances chargées de faire une évaluation de la population initiale, par quelle méthodologie et dans quels délais ?***
- Quelles sont les mesures de protection prévues pour ce type d'espèces ?***
- Existe-t-il des arrêtés d'interdiction de pêche en vigueur en Martinique ?***
- Quelles seront les mesures de suivi des populations et les instances responsables du suivi et de la protection ?***
- Quelles seront les moyens d'informations mis en place pour avertir les chasseurs et pêcheurs que cette espèce est protégée ? (sans annoncer précisément sa présence)***
- Quelles seront les sanctions appliquées en cas de prélèvement ?***

Par avance merci pour l'attention que vous avez apporté à la lecture de ce document. Nous nous tenons à votre disposition pour toutes informations complémentaires.

² ***Alfonso Aguilar-Perera*and Armin Tuz-Sulub (2010), Non-native, invasive red lionfish (Pterois volitans [Linnaeus, 1758]: Scorpaenidae), is first recorded in the southern Gulf ofMexico, off the northern Yucatan Peninsula, Mexico. Aquatic Invasions (2010) Volume 5, Supplement 1: S9-S12. Journal compilation © 2010 REABIC***

³ ***Maljković A, van Leeuwen TE, Cove SN (2008) Predation on the invasive red lionfish, Pterois volitans (Pisces: Scorpaenidae), by native groups in the Bahamas. Coral Reefs 27: 501, doi:10.1007/s00338-008-0372-9***

Pour en savoir plus sur le mérou rayé voici quelques documents en ligne :

Liste rouge de l'UICN (Avril 2014)

<http://www.iucnredlist.org>

Sadovoy, Y. et Eklund, AM. (1999) *Synopsis de données biologiques sur le mérou rayé, Epinephelus striatus (Bloch, 1792), et la Jawfish, E. itajara (Lichtenstein, 1822)*. NOAA, le Ministère du Commerce, de Seattle, Washington États-Unis. Disponible à:

<http://www.flmnh.ufl.edu/fish/Gallery/Descript/NassauGrouper/tr146.pdf>

Société pour la conservation des poissons de récif agrégations (SCRFA)

www.scrfa.org

Smithsonian Marine Station:

www.sms.si.edu/irlSpec/Epinep_striat.htm

Fishbase (juin 2014)

<http://www.fishbase.org>

Sadovoy, Y. (2002) *Le mérou de Nassau: une mise en garde de la découverte, de la science et de la gestion*. SCRFA, Hong Kong. Disponible à:

<http://www.scrfa.org>

Florida Museum of Natural History (Avril 2003)

<http://www.flmnh.ufl.edu/fish/Gallery/Descript/NassauGrouper/NassauGrouper.html>

Sadovoy, Y. et Eklund, A. (1999) *Synopsis de données biologiques sur le mérou rayé, Epinephelus striatus (Bloch, 1792), et la Jawfish, E. itajara (Lichtenstein, 1822)*. NOAA, le Ministère du Commerce, de Seattle, Washington États-Unis. Disponible à:

<http://www.flmnh.ufl.edu/fish/Gallery/Descript/NassauGrouper/tr146.pdf>

National Oceanic and Atmospheric Administration (NOAA) (juin 2014)

http://www.nmfs.noaa.gov/prot_res/species/fish/nassau_grouper.html

...

Annexe : Fiche descriptive des informations données sur le site IUCN.

Taxonomy

Kingdom Phylum Class Order Family
ANIMALIA CHORDATA ACTINOPTERYGII PERCIFORMES EPINEPHELIDAE

Scientific Name: *Epinephelus striatus*

Species Authority: (Bloch, 1792)

Common Name(s):

English – Nassau Grouper

Spanish – Cherna, Cherna Criolla

Synonym(s): *Epinephelus striatus* (Bloch, 1792)

1. Assessment Information

Red List Category & Criteria: Endangered A2ad [ver 3.1](#)

Year Published: 2003

Date Assessed: 2003-04-30

Annotations: Needs updating

Assessor(s): Cornish, A. & Eklund, A.-M.

Reviewer(s): Garcia-Moliner, G. & Sadovy, Y. (Grouper & Wrasse Red List Authority)

Justification:

Epinephelus striatus is assessed as Endangered based on a high rate of decline in population size. It is estimated that the population has declined by approximately 60% over the last three generations (27-30 years).

History: 1996 – Endangered

2. Geographic Range

Range

Description:

The Nassau Grouper is found from Bermuda and Florida throughout the Bahamas and Caribbean Sea. Heemstra and Randall (1993) indicate a second subpopulation lying along the coast of Brazil, roughly from Fortaleza to Rio de Janeiro. However this may be an error, as there do not appear to be any specimens or verifiable photographs of the Nassau grouper from Brazil (Heemstra, pers. comm. 2001, Moura 2001).

Native:

Anguilla; Antigua and Barbuda; Aruba; Bahamas; Barbados; Belize; Bermuda; Bonaire, Sint Eustatius and Saba (Saba, Sint Eustatius); Cayman Islands; Colombia; Costa Rica; Cuba; Curaçao; Dominica; Dominican Republic; French Guiana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; Jamaica; Mexico; Montserrat; Netherlands Antilles (Bonaire); Nicaragua; Panama; Puerto Rico; Saint Kitts and Nevis; Saint Lucia; Saint Martin (French part); Saint Vincent and the Grenadines; Sint Maarten (Dutch part); Suriname; Trinidad and Tobago; Turks and Caicos Islands; United States (Florida); United States Minor Outlying Islands; Venezuela, Bolivarian Republic of; Virgin Islands, British; Virgin Islands, U.S.

FAO MarineNative:

Fishing Areas: Atlantic – western central

Range Map: [Click here to open the map viewer and explore range.](#)

3. Population

Most time series landings/CPUE data sets show some yearly fluctuations and even large ones, but not order of magnitude fluctuations. However, Table 16 in Sadovy and Eklund (1999) of commercial landings in the US showed order of magnitude variations from 1986 to 1988 when

total landings in pounds were 15,633, 0, 4,737 respectively. The data has been checked and indeed, very few Nassau were caught in 1987, and for no apparent external reason (Eklund, pers. comm., March 2001). As the Nassau grouper is long-lived and relatively sedentary this is rather surprising.

Current population size is estimated at >10,000 mature individuals. It is estimated that a population decline of 60% has occurred over the last three generations (27-30 years). Ideally, the percentage decline (from the best available data, i.e., landings, CPUE, spawning aggregation size) would be applied to estimates of the original Nassau subpopulation within each country for which the decline applies. This would be done for all countries and the overall decline would be the percentage difference between the original global population size and the current one. Unfortunately, estimates of country stock size are rare. Therefore, past declines were weighted by coral reef area (rather than population size) to give an overall decline figure. This method assumes that pristine densities of Nassau grouper were the same at all localities. This is probably not likely to have been the case but it enables a single figure to be derived, which is likely more representative of the global situation than the alternative, which would be to say that the decline lies between 55 and 99.5% (the lowest and highest documented decline rates).

From the available data and most recent reports, Nassau subpopulations are likely to either be stable (e.g., the U.S.) or in decline (e.g., Cuba, Belize). Overall, it seems very likely (80-100%) that overall, the global population of Nassau grouper will continue to decline over the foreseeable future.

There is no evidence of distinct subpopulations of Nassau grouper based on genetic work (mtDNA and microsatellites) of fish sampled from a number of sites in Florida, Cuba, Belize and the Bahamas (Sedberry *et al.* 1996). Therefore, it is considered that there is only one subpopulation with all individuals in it, that the population is not severely fragmented. There is no evidence of extreme fluctuations in the number of locations or subpopulations.

Population Trend:  Decreasing

4. Habitat and Ecology

Habitat and Ecology: Occurs to at least 130 m and is most abundant in clear water with high relief coral reefs or rocky substrate (Sadovy and Eklund 1999) Post-settlement fish inhabit *Laurencia* macroalgal clumps, seagrass beds and coral (Eggleston 1995, Dahlgren 1998).
Generation time is estimated at 9-10 years, based on average fish size from an unexploited aggregation in Belize and the growth curve from five Cayman Island spawning aggregations (Sadovy and Eklund 1999).

Systems: Marine

5. Threats

Major Threat(s): Nassau Grouper are fished commercially and recreationally by handline, longline, fish traps, spear guns and gillnets. Aggregations are mainly exploited by handlines, or by fish traps, although gillnets have recently been used in Mexico. Declines in landings, catch per unit effort (CPUE) and, by implication, abundance have been reported throughout its range and it is now considered to

be commercially extinct in a number of areas (Sadovy and Eklund 1999). The fact that much of the catch in many areas comes from spawning aggregations (Sadovy and Eklund 1999) is also worrying given that targeted aggregations have evidently collapsed in many countries.

Suitable habitat for the Nassau grouper is also likely to be in decline. Of the estimated 20,000 km² of coral reef in the Caribbean, 29% is estimated to be under high risk of degradation from human activities, 32% is at medium risk and 39% is at low risk (Bryant *et al.* 1998). Although the Nassau grouper also inhabits rocky reefs, these are unlikely to be able to compensate for the loss of quality coral reef habitat.

6. Conservation Actions

There has been a complete ban on the fishing of Nassau grouper in the US federal waters since 1990. This includes federal waters around Puerto Rico and the U.S. Virgin Islands. There is also a ban on U.S. state waters. The species is a candidate for the US Endangered Species List.

In Mexico in 1997, the fishery authority completely banned fishing Nassau grouper "during spawning aggregations" (December to February) (Aguilar-Perera, pers. comm. 2001). This regulation is believed to still be in place.

In the Bahamas, three spawning aggregation sites, High Cay of the coast of Central Andros and two sites off the east coast off Long Island were protected by law from 17 Dec 1999 to 24 February 2000. In addition, fishing for Nassau grouper was banned throughout the Bahamas from 12-26 February 2000 (M. Braynen press release, February 2000). As of 2003, there is no enforcement (other than voluntary at one site) of fishery bans on aggregations at any site in the Bahamas (Sir Nicholas Nuttall, pers. comm.).

Conservation Actions:

In Belize, spawning aggregation sites were open to fishing on a rotational basis but in at least one recent case (Glover's Reef in 1999/2000), there was no enforcement of a fishing ban and it was fished (Sala and Ballesteros 2000). As a result of growing concern, all Nassau grouper aggregations were closed to fishing at the end of 2002 in Belize.

In the Cayman Islands, there are three main ('traditional') grouper 'holes' in the Cayman Islands which only residents are allowed to fish during spawning season. Only line fishing is permitted. This legislation appears to have come into effect in 1978 (Phil Bush, pers. comm. 2001). Recognizing further declines new legislation is to be introduced in January 2003 to protect Nassau grouper at designated spawning areas (Phillippe Bush pers. comm.).

In addition, it is forbidden to fish for groupers during spawning seasons in the Dominican Republic, there is a moratorium on fishing for Nassau groupers in Bermuda and a quota system was introduced for the capture of Nassau's in Cuba (see Sadovy and Eklund 1999).

The degree to which the Nassau grouper receives protection through no-take marine protected areas is not known.

The available evidence indicates that spawning aggregations are extremely important to maintenance of Nassau grouper populations, most of the data needed to improve the

accuracy of this assessment in the future would be on the current status and importance of these aggregations. Information on the following would be of great value:

- 1) Are traditional aggregation sites special or can aggregations form in new areas ?
- 2) Does reproduction in the Nassau grouper only occur in spawning aggregations and if this is the case, do mature individuals reproduce each year and do they always use the same site ?
- 3) There are a number of traditional aggregation sites that have reportedly disappeared (see Sadovy and Eklund 1999) that do not appear to have re-visited in recent years. Assessing the health of Nassau grouper populations in the future would be greatly improved by annual monitoring of as many traditional aggregation sites as possible. This would include checking for the possible formation of aggregations in the vicinity of traditional sites where no aggregation currently occurs.

It would also be helpful to know the degree to which Nassau groupers receive effective protection in marine protected areas of the Caribbean.

Citation: Cornish, A. & Eklund, A.-M. 2003. *Epinephelus striatus*. In: IUCN 2014. IUCN Red List of Threatened Species. Version 2014.1. <www.iucnredlist.org>. Downloaded on **29 June 2014**.

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